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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/397,018 09/15/99 WILLIAMS

J A-7264

EXAMINER

IM62/0501  
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RULLER, J

ART UNIT

PAPER NUMBER

1731

DATE MAILED:

05/01/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/397,018

Applicant(s)

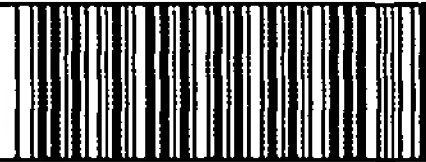
Williams

Examiner

Jacqueline Ruller

Group Art Unit

1731



☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-19 and 21-52 is/are pending in the application.

Of the above, claim(s) 14-19 and 21-50 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-13, 51, and 52 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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**Detailed Action**

***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-13, 51, and 52 , drawn to a process of for reducing the amount or preventing the formation of nitrosamines in a tobacco plant, classified in class 131, subclass 300.
  - II. Claims 14-19 and 21-25, drawn to a tobacco product, classified in class 131, subclass 347.
  - III. Claims 26-28, drawn to an apparatus, classified in class 34, subclass 265.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by another and materially different process, such as by chemical extraction of the nitrogen-containing anions and tobacco specific nitrosamines.
3. Inventions III and II are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for

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making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product as claimed can be made by another and materially different apparatus, such as a controlled solvent extraction system comprising a scrubber and condenser etc.

4. Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus, such as the one shown by Wilson in US Patent 3,664,034.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Paul Rivard on 4/19/2000 a provisional election was made **without** traverse to prosecute the invention of Group I, claims 1-13, 51 and 52.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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14-19 and 21-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102/103***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 52 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Marley et al. (4,790,335). Marley et al teach a tobacco product using a method and apparatus for curing that exposes tobacco to varying temperatures of circulating air. The tobacco is conveyed through a system in which heated air is circulated so that the various stages of curing can occur. The initial stages of curing, when the tobacco loses its green color and becomes yellow, occurs at lower temperatures than the drying stage, which occurs after the yellowing stage is complete. The temperature range for the entire

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curing process ranges between 105-180 degrees for leaves and 130-250 degrees for stems (col. 4, lines 40-55. Although it is not specifically stated that formation or prevention of nitrosamines occurs for the tobacco of this process, this is considered inherent, or in the alternative, obvious because the process steps of Marley et al. used to produce the tobacco are the same as the instant invention.

10. Claim 12 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bokelman et al. Bokelman et al teach a process of curing tobacco in which harvested green tobacco is cured by photobleaching followed by thermal browning. The process comprises exposing the green leaf tobacco to a steam at 100°C (controlling temperature) and then to a bleaching step where the tobacco is exposed to sunlight, incandescent or UV light (col. 1, line 65). There is no specific mention of nitrosamine production prevented or reduced, but there is mention of a reduction of nitrogen (which leads to the formation of nitrosamines-col. 1, line 57), however, it is considered that since the process is the same as claimed, and it is well-known in the art that removing nitrogen containing components significantly reduces nitrosamine formation during curing, it would be inherent or in the alternative, obvious.

11. Claims 1,4,10,11, 51 and 52 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Buensod (1,568,316). Buensod teaches a

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process in which tobacco is cured comprising filling a chamber with green tobacco leaves and circulating air through the spaces between the layers of tobacco wherein the air is heated by injecting warm air. The relative humidity is between 70-80% and the temperature is between 95-110 F (page 8, lines 40-50). It appears as though the process time is between 48 hours and 2 weeks (see page 8, second column). This process is not described as a flue-curing which applicant describes as recirculating exhaust gases which can lead to anaerobic conditions. Since there is no mention of exhaust gases and it is taught that periodically fresh air is added to the system, it is believed that the air is substantially free of exhausted gases and aerobic conditions are maintained. While the prevention or reduction of nitrosamine formation is not specifically taught, controlling the temperature, airflow, and relative humidity is taught, and since it is well known that removing nitrates, nitrites, or nitrogen containing components significantly reduces nitrosamine formation during curing, it is considered that this is inherent, or in the alternative, obvious.

Claims 2,3,5-9, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buensod (1,568,316). Buensod teach all that is recited, as shown above, except the specific air flow as recited and the lower values of relative humidity. Buensod teaches controlling the relative humidity, temperature, and airflow through the uncured tobacco so that the desired color and properties of the tobacco can be achieved. It is considered that it would have been obvious to one of ordinary skill in the art to determine the optimum process conditions for airflow, temperature,

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and relative humidity to effectively reduce or prevent nitrosamine formation and create the desired properties of the tobacco.

12. Claims 2- 11 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marley et al. alone, or in view of Wilson. Marley et al teach all that is recited (as shown above) except the rate of airflow, the time of the process run, and the humidity. Marley et al teach that the heater/blowers used in the system are rated at approximately 50,000 BTU and 75,000 BTU (col. 3, lines 31 and 41). It is taught that exit ports exist which allow venting of heated air and moisture. This suggests that the humidity is controlled and that enough air is being supplied to prohibit anaerobic conditions. While the rate of airflow, the relative humidity, and time of each run is not specifically taught, it is considered that the heater/blower has the capability to achieve the values recited and that a change in a process condition of an old process is an unpatentable modification, especially since the optimum process conditions could be determined through minimal experimentation. It is being considered that the air is substantially free of combustion gases because it is not disclosed that combustion gases are present, the process is not described as flue-cured, and the heater/blower is not disclosed as being gas or oil fired, so it is assumed that the air is substantially free of exhaust gases. Wilson teaches a system of curing tobacco wherein the temperature, amount of air being circulated, and relative humidity is controlled. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add



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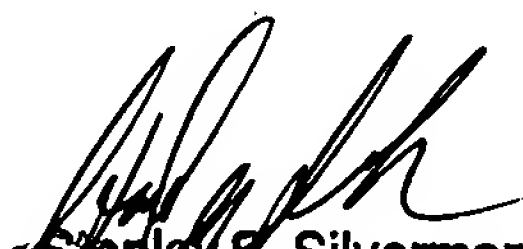
means to control the relative humidity and rate/amount of airflow into the system of Marley et al (assuming it isn't already present) to further help eliminate premature drying.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marley et al in view of Hopkins or Wochnowski. Marley et al teach all that is recited (as shown above) except exposing the tobacco to microwave energy. Hopkins and Wochnowski teach treating uncured products, such as tobacco with microwaves. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute microwave energy for the heater of Marley et al so that the tobacco would be uniformly heated (see col. 2, lines 34-35 of Hopkins).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Ruller whose telephone number is (703) 308-0316. The examiner can normally be reached on Monday, Tuesday and Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (703) 308-3837. The fax phone number for this Group is (703) 305-7115.

  
JAR

  
Stanley S. Silverman  
Supervisory Patent Examiner  
Technology Center 1700

April 24, 2000